

**I CLAIM:**

- 5     1.     A method of detecting a graffiti-making act, comprising:  
          sonically detecting the graffiti-making act;  
          initiating an alarm indicating that the graffiti-making act took place.
- 10     2.     The method of claim 1, wherein sonically detecting the graffiti-making act  
          includes sonically detecting the spraying noise of a spray can.
- 15     3.     The method of claim 1, wherein sonically detecting the graffiti-making act  
          includes sonically detecting the sound made by writing with a felt-marker pen on a  
          surface.
- 20     4.     The method of claim 1, wherein sonically detecting the graffiti-making act  
          includes sonically detecting the sound made by scratching an abrasive instrument on a  
          surface.
- 25     5.     The method of claim 4, wherein the abrasive instrument is a member from the  
          group consisting of a stone, a gem, a screwdriver, and a glass cutter.
6.     The method of claim 1, wherein sonically detecting the graffiti-making act  
          includes sonically detecting the graffiti-making act with a sensor selected from the group  
          consisting of a piezoelectric sensor, a dynamic sensor, an electret sensor, a carbon sensor,  
          a bolometer sensor, an optical reflection sensor, a capacitive sensor, an inductive sound  
          sensor, and an ultrasonic sensor.

7. The method of claim 1, wherein sonically detecting the graffiti-making act includes detecting the sound spectrum pattern of the graffiti-making act.

5 8. The method of claim 1, wherein sonically detecting the graffiti-making act further includes sonically focusing sound produced from the graffiti-making act.

9. The method of claim 8, wherein sonically focusing sound produced from the graffiti-making act includes sonically focusing the sound with a member selected from  
10 the group consisting of phase arrays, reflectors, and lenses.

10. The method of claim 8, wherein sonically focusing sound produced from the graffiti-making act includes de-selecting other similar sounds that may effect a false alarm.

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11. The method of claim 10, wherein de-selecting includes baffling sound.

12. The method of claim 1, wherein sonically detecting includes filtering sound spectral characteristics of sound from said graffiti-making act.

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13. The method of claim 1, wherein sonically detecting includes filtering using a technique from the group consisting of duration and time coding of the sound, digital code quantization, digitized algorithm analysis, and Fourier Transform analysis.

25 14. The method of claim 1, wherein the alarm is a member from the group consisting of a bell, a light, a horn, a speaker, a marking means, a camera to record the activity, a camera to monitor the activity, a photo process, a phone device, a wireless

communication device, a cage, a trap, and a disabling means.

15. The method of claim 1, further including confirming that a graffiti-making act took place with one or more additional sensors.

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16. The method of claim 15, wherein the one or more sensors are a member from the group consisting of a motion detector and a heat detector.

17. A method of detecting a graffiti-making act of spraying with a spray paint can,  
10 comprising:

sonically detecting a spraying noise made from the spray paint can using one or more sonic sensors;

communicating that a graffiti-making act has been detected to one or more entities.

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18. A method of detecting a graffiti-making act, comprising:  
detecting a graffiti-making act using one or more sensors;  
communicating that a graffiti-making act has been detected to one or more entities.

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19. The method of claim 18, wherein detecting a graffiti-making act includes sensing an odor spectrum pattern of the graffiti-making act with an olfactory sensor, and using electronic spectral analysis to determine that a graffiti-making act occurred.

25 20. The method of claim 18, wherein detecting a graffiti-making act includes sonically sensing a sound spectrum pattern of the graffiti-making act with a sonic sensor, and using electronic spectral analysis to determine that a graffiti-making act occurred.

21. The method of claim 20, wherein the graffiti-making act includes spraying with a spray paint can, and sonically sensing includes sonically sensing a spraying noise of the spray paint can.

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22. The method of claim 20, wherein the graffiti-making act includes spraying with a spray paint can, and sonically sensing includes sonically sensing a rattling noise caused by shaking the spray paint can to mix paint inside the spray paint can.

10 23. The method of claim 20, wherein the graffiti-making act includes writing with a felt-marker pen on a surface, and sonically sensing includes sonically sensing a sound made by writing with a felt-marker pen on a surface.

15 24. The method of claim 20, wherein the graffiti-making act includes scratching with an abrasive instrument on a surface, and sonically sensing includes sonically sensing the sound made by scratching with an abrasive instrument on a surface.

20 25. The method of claim 18, further including confirming that a graffiti-making act took place with at least one motion detector to detect movement of a perpetrator of the graffiti-making act.

25 26. The method of claim 18, further including confirming that a graffiti-making act took place with at least one heat detector to detect body heat of a perpetrator of the graffiti-making act.

27. The method of claim 18, further including confirming that a graffiti-making act took place with at least one sonic detector to detect a sound of the graffiti-making act.

28. The method of claim 18, further including confirming that a graffiti-making act took place with at least one olfactory detector to detect an odor of the graffiti-making act.

5 29. The method of claim 18, wherein detecting a graffiti-making act includes amplifying a signal from said at least one sensor to a distinguishable level, combining the signal with a predetermined signature signal, reducing signal noise, and determining whether the resulting signal includes a spectrum pattern matching a predetermined spectrum pattern of one or more graffiti-making acts for a predetermined period of time.

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30. The method of claim 18, wherein communicating to one or more entities includes communicating to a police dispatcher.

31. The method of claim 18, wherein communicating to one or more entities includes  
15 communicating to one or more police officers on patrol in a general area of the graffiti-making act.

32. The method of claim 18, wherein communicating to one or more entities includes communicating to an owner of a property where the graffiti-making act took place.

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33. The method of claim 18, wherein communicating to one or more entities includes communicating to a security system center.

34. The method of claim 18, wherein communicating to one or more entities includes  
25 dialing one or more predetermined phone numbers.

35. The method of claim 18, wherein communicating to one or more entities includes

communicating one or more of the following: a graffiti-marking act has been detected, the location of the graffiti-marking act, the type of graffiti-marking act, the time the graffiti marking act took place.

- 5     36.     The method of claim 18, wherein detecting a graffiti-making act includes detecting a graffiti-making act using one or more sensors and a base unit powered by a battery, the method further including communicating to one or more entities that the battery is low and needs to be replaced.
- 10    37.     The method of claim 18, wherein said one or more sensors communicate wirelessly with a base unit, and detecting a graffiti-making act includes transmitting a signal representative of the graffiti-making act to the base unit for processing of the signal.
- 15    38.     The method of claim 18, wherein detecting the graffiti-making act includes detecting one or more different graffiti-making acts with one or more different types of sensors.
39.     The method of claim 18, wherein detecting the graffiti-making act includes  
20    detecting multiple graffiti-making acts with a single sensor.
40.     A graffiti detection system for detecting a graffiti-making act, comprising:
- one or more sensors adapted to sense the graffiti-making act and transmit a signal  
25    representative of the graffiti-making act; and  
         a base unit including  
             electronics adapted to process the signal and determine whether the signal

represents a graffiti-making act; and  
a communication device coupled to the electronics and adapted to  
communicate to one or more entities that a graffiti-making act has been detected.

- 5 41. The system of claim 40, wherein said one or more sensors include one or more  
olfactory sensors adapted to sense an odor spectrum pattern of the graffiti-making act and  
transmit a signal representative of the odor spectrum pattern of the graffiti-making act,  
and said electronics adapted to process the signal to determine if the odor spectrum  
pattern represents a graffiti-making act.
- 10 42. The system of claim 40, wherein said one or more sensors include one or more  
sonic sensors adapted to sense a sound spectrum pattern of the graffiti-making act and  
transmit a signal representative of the sound spectrum pattern of the graffiti-making act,  
and said electronics adapted to process the signal to determine if the sound spectrum  
15 pattern represents a graffiti-making act.
43. The system of claim 42, wherein said one or more sonic sensors are adapted to  
sense a spraying noise of a spray can.
- 20 44. The system of claim 42, wherein said one or more sonic sensors are adapted to  
sense a rattling noise caused by shaking a spray paint can to mix paint inside the spray  
paint can.
45. The system of claim 42, wherein said one or more sonic sensors are adapted to  
25 sense the sound made by writing with a felt-marker pen on a surface.
46. The system of claim 42, wherein said one or more sonic sensors are adapted to

sense a sound made by scratching with an abrasive instrument on a surface.

47. The system of claim 40, further including a motion detecting sensor adapted to detect movement of a perpetrator of the graffiti-making act for confirming that a graffiti-making act took place.

48. The system of claim 40, further including a heat detecting sensor adapted to detect body heat of a perpetrator of the graffiti-making act for confirming that a graffiti-making act took place.

49. The system of claim 40, further including an olfactory detector adapted to detect an odor of the graffiti-making act for confirming that a graffiti-making act took place.

50. The system of claim 40, further including a sonic detector adapted to detect a sound of the graffiti-making act for confirming that a graffiti-making act took place.

51. The system of claim 40, wherein said electronics include a pre-amplifier adapted to amplify the signal from said at least one sensor to a distinguishable level, a mixer adapted to combine the signal with a predetermined signature signal, a low-pass filter and a precision rectifier adapted to reduce signal noise, and a time domain characterization mechanism adapted to determine whether the resulting signal represents a graffiti-making act for a predetermined period of time.

52. The system of claim 51, wherein said time domain characterization mechanism includes a charge pump.

53. The system of claim 51, wherein said time domain characterization mechanism



includes a quantitative characterization device such as a microprocessor to determine whether the resulting signal includes a spectrum pattern matching a predetermined spectrum pattern of one or more graffiti-making acts for a predetermined period of time.

5 54. The system of claim 40, wherein said communication device is adapted to communicate with a police dispatcher.

10 55. The system of claim 40, wherein said communication device is adapted to communicate with one or more police officers on patrol in a general area of the graffiti-making act.

56. The system of claim 40, wherein said communication device is adapted to communicate with an owner of the property where the graffiti-making act took place.

15 57. The system of claim 40, wherein said communication device is adapted to communicate with a security system center.

20 58. The system of claim 40, wherein said communication device is adapted to dial one or more predetermined phone numbers.

59. The system of claim 40, wherein said base unit is adapted to be powered by a battery, and said communication device is adapted to communicate to one or more entities that the battery is low and needs to be replaced.

25 60. The system of claim 40, wherein said one or more sensors are adapted to communicate wirelessly with said base unit.

61. The system of claim 40, wherein said one or more sensors are adapted to communicate with said base unit through wired means.

62. The system of claim 40, wherein said one or more sensors are integral with said  
5 base unit.

63. The system of claim 40, wherein said one or more sensors include one or more different types of sensors adapted to sense one or more different types of graffiti-making acts.

10 64. The system of claim 40, wherein said one or more sensors are one or more sonic sensors adapted to sense a broad range of sound frequencies.

15 65. The system of claim 40, wherein said one or more sensors are one or more sonic sensors adapted to sense sound frequencies or a sound frequency that is the same as or similar to that of the sound of one or more specific graffiti-making acts.

20 66. The system of claim 40, wherein said one or more sensors include a single sensor adapted to sense more than one different types of graffiti-making acts.

25 67. The system of claim 40, wherein said one or more sensors include one or more of the following types of sensors: a piezoelectric sensor, a dynamic sensor, an electret sensor, a carbon sensor, a bolometer sensor, an optical reflection sensor, a capacitive sensor, an inductive sound sensor, and an ultrasonic sensor.

68. The system of claim 40, wherein said one or more sonic sensors are adapted to sense the sound of a graffiti-making act up to a distance of 400 feet.

69. The system of claim 40, wherein said one or more sonic sensors are adapted to send either a 900 megahertz or a spread spectrum signal.

5 70. The system of claim 40, wherein said electronics are adapted to filter sound using a technique from the group consisting of duration and time coding of the sound, digital code quantization, digitized algorithm analysis, and Fourier Transform analysis.

10 71. The system of claim 40, wherein said base unit includes an alarm selected from the group consisting of a bell, a light, a horn, a whistle, a speaker, a marking means, a camera to record the activity, a camera to monitor the activity, sprinkler, a cage, a trap, and a disabling means:

15 72. A graffiti detection system for detecting a graffiti-making act, comprising:

means for sensing a graffiti-making act and transmitting a signal representative of the graffiti-making act; and

a base unit including

means for determining whether the signal represents a graffiti-making act;

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means for communicating to one or more entities that a graffiti-making act has been detected.